Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-18 (canceled)

Claim 19 (original): A method for forming an electrical interconnection structure for connection to large electrical contacts, the method comprising:

providing a semiconductor substrate having a copper-containing pad layer formed thereon such that the copper-containing pad layer includes a plurality of elongate slots having a long axis, a short axis, and sidewalls, the slots extending through the pad layer to expose the underlying semiconductor substrate;

forming, over the pad layer, a dielectric layer having a plurality of elongate trenches formed therein, the elongate openings having a long axis, a short axis, and sidewalls and are configured to extend into the dielectric layer to a depth such that electrical connections to the underlying copper-containing pad layer can be formed;

forming elongate copper-containing contacts in the plurality of elongate openings thereby establishing electrical connections to the underlying copper-containing pad layer; and

conducting further processing as needed.

Claim 20 (withdrawn): A method as in Claim 19 wherein the step of forming the dielectric layer comprises forming the dielectric layer such that the long axis of the elongate slots lies substantially parallel to the long axis of the elongate trenches in the pad layer to expose a portion of the sidewalls of the elongate trenches of the pad layer.

Claim 21 (withdrawn): A method as in Claim 20 wherein the step of forming elongate copper-containing contacts in the plurality of elongate trenches includes the steps of:

forming at least one barrier layer in the elongate slots;

forming a seed layer in the elongate slots;

forming a bulk copper-containing layer on the seed layer; and

wherein the step of conducting further processing includes removing excess copper-containing materials from a surface of the dielectric layer and electrically connecting the elongate copper-containing contacts to other circuit elements.

Claim 22 (withdrawn): A method as in Claim 21 wherein the step of conducting further processing includes forming other semiconductor circuit structures.

Claim 23 (original): A method as in Claim 19 wherein the step of forming the dielectric layer comprises forming the dielectric layer such that the long axis of the elongate slots lies transverse to the long axis of the elongate trenches in the pad layer to expose a portion of the sidewalls of the elongate trenches of the pad layer.

Claim 24 (original): A method as in Claim 23 wherein the step of forming elongate copper-containing contacts in the plurality of elongate trenches includes the steps of:

forming at least one barrier layer in the elongate slots;

forming a seed layer in the elongate slots;

forming a bulk copper-containing layer on the seed layer; and

wherein the step of conducting further processing includes removing excess copper-containing materials from a surface of the dielectric layer and electrically connecting the elongate copper-containing contacts to other circuit elements.

Claim 25 (original): A method as in Claim 24 wherein the step of conducting further processing includes forming other semiconductor circuit structures.

Claim 26 (new): A method for forming an electrical interconnection structure for connection to large electrical contacts, the method comprising:

providing a semiconductor substrate having a conductive pad layer formed thereon such that the copper-containing pad layer includes a plurality of elongate slots having a long axis, a short axis, and sidewalls, the slots extending through the pad layer to expose the underlying semiconductor substrate;

forming a dielectric layer over the pad layer;

forming a plurality of elongate trenches in the dielectric layer, the elongate trenches having a long axis, a short axis, and sidewalls and are configured to such that the long axis of the elongate trenches lies transverse to the long axis of the elongate slots in the pad layer to expose a portion of the sidewalls of the elongate slots of the pad layer and wherein the trenches extend sufficiently deep into the dielectric layer so that electrical connections to the underlying conductive pad layer can be formed; and

filling the elongate trenches of the dielectric layer with a conductive material to form conductive contacts which for electrical contacts with the portions of the sidewalls and tops of the conductive pad, thereby establishing electrical connections to the underlying conductive pad layer.

Claim 27 (new): A method as in Claim 26 wherein the step of filling the plurality of elongate trenches includes the steps of:

forming at least one barrier layer in the elongate slots;

forming a seed layer in the elongate slots;

forming a bulk copper-containing layer on the seed layer; and

removing excess copper-containing materials from a surface of the dielectric layer and electrically connecting the elongate copper-containing contacts to other circuit elements.

Claim 28 (new): A method as in Claim 27 further including the operation of conducting further processing as needed.

Claim 29 (new): A method as in Claim 28 wherein the operation of conducting further processing includes forming electrical connections to other semiconductor circuit structures.

Claim 30 (new): A method as in Claim 28 wherein the operation of conducting further processing includes forming an electrically conductive top pad on the dielectric layer wherein the top pad is electrically connected with the conductive contacts.